

1 ABSTRACT OF THE DISCLOSURE

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3 A uniform method for implementing multiple tunneling
4 protocols in a switch or router is disclosed. The method is based
5 on the realization that although the tunneling protocols are very
6 different, they do share a similar overall structure which can be
7 exploited to create a unified method of dealing with multiple
8 protocols. By using similar data structures to implement multiple
9 protocols, the invention makes data management and programming
10 simple and, therefore, cost effective. According to the
11 invention, all tunneling protocols are abstracted as the mapping
12 of input L2 or L3 streams with output L2 or L3 streams. Mapping
13 is provided by a finite set of tunnel interfaces. The tunnel
14 interfaces map the input streams to output interfaces. As traffic
15 streams flow through these interfaces, they are processed
16 according to defined attributes of these interfaces.